

MARINE CORPS WARFIGHTING LABORATORY

The purpose of the **Lightweight Water Purifier (LWP)** is to provide operating forces with a highly mobile, reverse osmosis capability to produce a safe, reliable supply of potable water.

Background: The Office of Naval Research (ONR) is developing improved water production capabilities for the Marine Corps. Their Lightweight Water Purifier (LWP) project originated with the idea to simplify the new Army LWP design, reduce the overall system weight and footprint/cube and make the LWP easier to troubleshoot and maintain by field personnel. The Lab will evaluate the variety of lightweight desalination systems currently available for possible procurement by the Marine Corps Systems Command (MCSC).

Description: The Lab will conduct a market survey of commercially available LWP systems and perform an operator evaluation of those systems and the Army system. The evaluation will be conducted in two phases: the first phase will be accomplished by Seawater Desalination Test Facility (SDTF) staff members at Naval Facilities Engineering Service Center (NFESC), Port Hueneme, Calif., while the second phase will be done by the Lab with Marines from the Operational Forces. During testing, data will be gathered to evaluate a system's operational characteristics to determine if this capability satisfies the needs of the Marine Air-Ground Task Force. Operator opinions will be gathered in a questionnaire designed to document the advantages and disadvantages of the various systems.

LIGHTWEIGHT WATER PURIFIER

fact sheet



Specifications:

Total System Weight: About 1200 lbs., with each module weighing no more than 200 lbs.

Transportability: All components must fit inside a high-back Hum-Vee

Purification rates: 125 gallons per hour from fresh water source and 75 gallons per hour from salt/brackish water source

Deliverable Products: Provide results of the survey and evaluations to ONR and the Marine Corps Combat Development Command to refine their Initial Requirements Document; and to MCSC for system selection under POM 06.

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3255 MEYERS AVENUE
QUANTICO, VA 22134
WWW.MCWL.QUANTICO.USMC.MIL